

CORRECTED DIRECT TESTIMONY OF**ERIC H. BELL, P.E.****ON BEHALF OF****DOMINION ENERGY SOUTH CAROLINA, INC.****DOCKET NO. 2021-2-E**

1 **Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND**
2 **OCCUPATION.**

3 A. My name is Eric H. Bell. My business address is 220 Operation Way, Cayce,
4 South Carolina. My position is Manager - Electric Market Operations for Dominion
5 Energy South Carolina, Inc. ("DESC" or the "Company").
6

7 **Q. STATE BRIEFLY YOUR EDUCATION, BACKGROUND, AND**
8 **EXPERIENCE.**

9 A. I am a graduate of the University of Texas at Austin with a Bachelor of
10 Science degree in Electrical Engineering and am licensed in South Carolina as a
11 Professional Engineer. Following graduation, I served in the United States Navy as
12 a Nuclear Submarine Officer. In 1994, I began my career with South Carolina
13 Electric & Gas Company ("SCE&G") as Assistant Plant Engineer and, in 1997, was
14 promoted to Operations Planner. From 2001 to 2008, I engaged in economic
15 resource commitment efforts and, in 2008, I assumed my current role as Manager –
16 Electric Market Operations. In this position I manage a group of Economic

1 Resource Commitment Planners and am responsible for managing and optimizing
2 generation fleet dispatch and unit commitment to provide reliable, low-cost energy
3 to DESC customers. Among other things, my responsibilities include participating
4 in fuel purchasing decisions, unit commitment, and the coordination of activities
5 and system data with power marketing, transmission system control, maintenance
6 scheduling, and natural gas supply. Since June of 2019, I have also been responsible
7 for DESC's generation planning, which includes managing the development of the
8 Integrated Resource Plan ("IRP") and avoided cost studies.

9
10 **Q. HAVE YOU PREVIOUSLY TESTIFIED AS AN EXPERT WITNESS**
11 **BEFORE THE PUBLIC SERVICE COMMISSION OF SOUTH CAROLINA**
12 **(THE "COMMISSION")?**

13 A. Yes, I have testified before in a prior proceeding.

14
15 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

16 The purpose of my testimony is to discuss the 11 components of value for
17 distributed energy resource ("DER") avoided cost contained in the net energy
18 metering ("NEM") methodology approved by the Commission in Order No. 2015-
19 194, issued in Docket No. 2014-246-E. I also address an issue impacting the NEM
20 Distributed Energy Resources valuation that was identified by the South Carolina
21 Office of Regulatory Staff ("ORS") regarding the length of the planned outage for

1 the Jasper Generating Plant beginning in October 2021; explain an error in the
2 calculation of NEM Distributed Energy Resources the Company identified during
3 its investigation of the Jasper Generating Plant outage issue; and discuss the
4 necessary changes to the NEM Distributed Energy Resources as a result of
5 correcting the identified errors. At the end of my testimony, I also discuss a change
6 in the fuel price used to dispatch coal-fired generation units that was implemented
7 on January 1st of this year.
8

9 **NEM BACKGROUND**

10 **Q. WHAT ARE DISTRIBUTED ENERGY RESOURCES?**

11 A. South Carolina Code Section 58-39-120(C) defines DER as follows:
12 [D]emand- and supply-side resources that can be deployed throughout
13 the system of an electrical utility to meet the energy and reliability
14 needs of the customers served by that system, including, but not
15 limited to, renewable energy facilities, managed loads (including
16 electric vehicle charging), energy storage, and other measures
17 necessary to incorporate renewable generation resources, including
18 load management and ancillary services, such as reserves, voltage
19 control, and reactive power, and black start capabilities.
20

1 **Q. WHAT IS NET ENERGY METERING?**

2 A. South Carolina Code Section 58-40-10(E) defines NEM as follows:
3 “Net energy metering” means using metering equipment sufficient to
4 measure the difference between the electrical energy supplied to a
5 customer-generator by an electrical utility and the electrical energy
6 supplied by the customer-generator to the electricity provider over the
7 applicable billing period.

8
9 **Q. HOW IS NEM EMPLOYED ON THE COMPANY’S ELECTRIC SYSTEM?**

10 A. For customers using solar or other DER on the system, NEM measures
11 generation on both sides of the meter, i.e., it measures both the electricity provided
12 by the Company to the customer as well as the electricity provided by the customer
13 to the Company if the customer’s DER generates more electricity than the customer
14 uses. All NEM customers currently on the DESC system have installed photovoltaic
15 (“PV”) solar generation.

16
17 **Q. WHAT ARE AVOIDED COSTS?**

18 A. As Company Witness Furtick notes in his testimony, South Carolina Code
19 Section 58-39-120(B) defines “avoided costs” as “payments for purchases of
20 electricity made according to an electrical utility’s most recently approved or
21 established avoided cost rates in this State or rates negotiated pursuant to [the

1 Public Utility Regulatory Policies Act (“PURPA”)], in the year the costs are
2 incurred, for purchases of electricity from qualifying facilities pursuant to Section
3 210 of [PURPA]....”

4 PURPA and its implementing regulations require electric utilities, including
5 DESC, to purchase electric energy from qualifying facilities (“QF”) at the utilities’
6 avoided costs. However, state public utility commissions, such as the Commission,
7 determine the method for calculating avoided costs, which are updated on a periodic
8 basis. PURPA and the related regulations define “avoided costs” as “the
9 incremental costs to an electric utility of electric energy or capacity or both which,
10 but for the purchase from the qualifying facility or qualifying facilities, such utility
11 would generate itself or purchase from another source.” 18 C.F.R. § 292.101(b)(6).
12 The Federal Energy Regulatory Commission (“FERC”) further recognizes that
13 avoided costs include two components: “energy” and “capacity.” Specifically,
14 “[e]nergy costs are the variable costs associated with the production of electric
15 energy (kilowatt-hours). They represent the cost of fuel, and some operating and
16 maintenance expenses. Capacity costs are the costs associated with providing the
17 capability to deliver energy; they consist primarily of the capital costs of facilities.”
18 *Small Power Production and Cogeneration Facilities; Regulations Implementing*
19 *Section 210 of the Public Utility Regulatory Policies Act of 1978*, Order No. 69, 45
20 Fed. Reg. 12,214, 12,216 (Feb. 25, 1980); *see also Qualifying Facility Rates and*
21 *Requirements Implementation Issues Under the Public Utility Regulatory Policies*

1 *Act of 1978*, Order No. 872-A, 173 FERC ¶ 61158 (Nov. 19, 2020) (“The [FERC]
2 has not changed these definitions; they still apply to both ‘short-run’ (energy or non-
3 firm power) and long-run (capacity or firm power) avoided costs.”).

4
5 **Q. WHAT APPROACH DOES DESC TAKE TO CALCULATE THE ENERGY**
6 **AND CAPACITY COMPONENTS OF AVOIDED COSTS?**

7 A. As approved by the Commission in Orders No. 2016-297, 2018-322(A), and
8 2019-847, DESC uses a Difference in Revenue Requirements methodology to
9 calculate both the energy component and the capacity component of its avoided
10 costs. This approach follows directly from PURPA’s definition of avoided costs in
11 that it involves calculating the revenue requirements between a base case and a
12 change case. The base case is defined by DESC’s existing and future fleet of
13 generators and the hourly load profile to be served by these generators, as well as
14 the solar facilities with which DESC has executed a power purchase agreement. The
15 change case is the same as the base case except that, pursuant to Order No. 2020-
16 244, a zero-cost purchase transaction is modeled at 100MW around the clock. This
17 is the same technology neutral avoided energy cost calculation used for the PR –
18 Standard Offer as presented by South Carolina Solar Business Alliance (“SBA”)
19 Witness Burgess in Docket 2019-184-E and endorsed by the Commission in that

1 proceeding.¹ For the avoided energy cost determination, a system production cost
2 model called PROSYM, which models the least-cost commitment and dispatch of
3 generating units to serve load hour-by-hour, makes two runs and estimates the
4 production costs and benefits that result from the purchase transaction. The base
5 and change cases are identical except for the zero-cost purchase transaction. The
6 avoided energy cost is the difference between the base case costs and the change
7 case costs.

8
9 **COMPONENTS OF VALUE FOR**
10 **NET ENERGY METERING DISTRIBUTED ENERGY RESOURCES**

11 **Q. WHAT ARE THE COMPONENTS OF VALUE FOR NEM DISTRIBUTED**
12 **ENERGY RESOURCES?**

13 A. In Order No. 2015-194, the Commission approved the following 11
14 components of value for NEM Distributed Energy Resources:

¹ The Company is using SBA Witness Burgess's energy cost calculation for purposes of this proceeding, but understands that this calculation significantly overstates the value of solar generation.

Net Energy Metering Methodology

1. +/- Avoided Energy
 2. +/- Energy Losses/Line Losses
 3. +/- Avoided Capacity
 4. +/- Ancillary Services
 5. +/- T&D Capacity
 6. +/- Avoided Criteria Pollutants
 7. +/- Avoided CO₂ Emission Cost
 8. +/- Fuel Hedge
 9. +/- Utility Integration & Interconnection Costs
 10. +/- Utility Administration Costs
 11. +/- Environmental Costs
- = Total Value of NEM Distributed Energy Resources**

As directed by the Commission in Order No. 2020-244 issued in Docket No. 2019-184-E, the Company submitted the current components of value of NEM Distributed Energy Resources to the Commission by letter dated March 26, 2020.² Table 1, below, shows these current components of value.

² For clarity, I note that in the Table of Total Value of NEM Distributed Energy Resources that was submitted to the Commission in the March 26, 2020, the header of the second column reads “IRP Planning Horizon (15-Year Levelized).” However, this column should have been captioned “10-Year Levelized” because the Commission approved the use of a 10-year period for NEM Distributed Energy Resources in Order No. 2019-847 and that was the basis on which the numbers in that column in the March 26, 2020 letter were calculated.

Table 1
Total Value of NEM Distributed Energy Resources (\$/kWh)
Currently in Effect

	Current Period (\$/kWh)	10-Year Levelized (\$/kWh)	Components
1	\$0.02784	\$0.02865	Avoided Energy Costs
2	\$0	\$0.00379	Avoided Capacity Costs
3	\$0	\$0	Ancillary Services
4	\$0	\$0	T & D Capacity
5	\$0.0000300	\$0.0000300	Avoided Criteria Pollutants
6	\$0	\$0	Avoided CO ₂ Emission Cost
7	\$0	\$0	Fuel Hedge
8	(\$0.00096)	(\$0.00096)	Utility Integration & Interconnection Costs
9	\$0	\$0	Utility Administration Costs
10	\$0.00890	\$0.00105	Environmental Costs
11	\$0.02780	\$0.03256	Subtotal
12	\$0.00227	\$0.00266	Line Losses @ 0.9245
13	\$0.03007	\$0.03522	Total Value of NEM Distributed Energy Resources

Q. HAS DESC UPDATED THESE COMPONENTS OF VALUE?

A. Yes. Table 2 shows the updated components of value for NEM Distributed Energy Resources. Two columns of numbers are shown: one for the current value and one for the value over the ten-year planning period. The difference between these two columns of numbers represents the future benefits of DER that are subject to recovery by the Company pursuant to Commission Order No. 2015-194 and South Carolina Code Section 58-40-20.

Table 2
Total Value of NEM Distributed Energy Resources (\$/kWh)
Proposed Values

	Current Period (\$/kWh)	10-Year Levelized (\$/kWh)	Components
1	\$0.02760 <u>02877</u>	\$0.03085 <u>03163</u>	Avoided Energy Costs
2	\$0	\$0.00379	Avoided Capacity Costs
3	\$0	\$0	Ancillary Services
4	\$0	\$0	T & D Capacity
5	\$0.0000011	\$0.000001 <u>00000011</u>	Avoided Criteria Pollutants
6	\$0	\$0	Avoided CO ₂ Emission Cost
7	\$0	\$0	Fuel Hedge
8	(\$0.00096)	(\$0.00096)	Utility Integration & Interconnection Costs
9	\$0	\$0	Utility Administration Costs
10	\$0.00127 <u>00126</u>	\$0.00121 <u>00120</u>	Environmental Costs
11	\$0.02791 <u>02907</u>	\$0.03489 <u>03566</u>	Subtotal
12	\$0.00228 <u>00237</u>	\$0.00285 <u>00291</u>	Line Losses @ 0.9245
13	\$0.03019 <u>03145</u>	\$0.03774 <u>03857</u>	Total Value of NEM Distributed Energy Resources

Q.—Q. BEFORE YOU EXPLAIN EACH COMPONENT OF VALUE, DID THE COMPANY DETERMINE THAT THE PREVIOUSLY FILED NEM DISTRIBUTED ENERGY RESOURCES VALUES REQUIRED CORRECTION AS A RESULT OF ORS’S REVIEW AND ANALYSIS?

A. Yes. As part of its regular planning and maintenance process, the Company scheduled a maintenance outage for the Jasper Generating Plant located in Jasper County, South Carolina. The outage is for the purpose of conducting necessary

1 maintenance and is scheduled for a 34-day outage beginning on October 24, 2021,
2 and continuing through November 27, 2021. However, in preparing its fuel forecast,
3 the Company inadvertently designated the outage in the production cost model as
4 taking place from October 24, 2021, through October 27, 2021, and thus requiring
5 only three days. This three-day outage was used in the calculation of the NEM
6 Distributed Energy Resources values as set forth in my originally filed Direct
7 Testimony.

8 During the discovery process in this proceeding, DESC provided the model
9 data and calculations used in the proposed avoided cost values included in Table 2
10 of my direct testimony. While reviewing the data and calculations, ORS noticed an
11 inconsistency between the DESC generator maintenance schedule and the
12 forecasted production from the Jasper Generating Plant, and ORS asked the
13 Company about the inconsistency. Upon investigation, DESC discovered that the
14 ending date for the planned outage was input as ending on October 27 rather than
15 November 27.

1 Q. DID THE COMPANY IDENTIFY ANOTHER ISSUE IN THE
2 CALCULATION OF NEM DISTRIBUTED ENERGY RESOURCES
3 DURING ITS INVESTIGATION OF THE JASPER GENERATING PLANT
4 OUTAGE?

5 A. Yes. As part of the investigation, the Company determined that the avoided
6 energy costs set forth in Table 2 of my direct testimony did not include a single
7 output variable—“energy not served costs”—that contributes to the avoided energy
8 cost component of the NEM Distributed Energy Costs. This variable was
9 inadvertently omitted from the output control file of the PROSYM model runs.

10
11 Q. HAVE THE VALUES IN TABLE 2 BEEN UPDATED TO CORRECT THE
12 ERRORS IDENTIFIED IN THE INVESTIGATION CONDUCTED IN
13 RESPONSE TO ORS’S INQUIRY?

14 A. Yes. The company corrected the PROSYM inputs to accurately represent
15 the length of the planned maintenance outage for the Jasper Generating Plant and to
16 include the omitted “energy not served costs” variable, which yielded revised
17 amounts for NEM Distributed Resources. The changes in Table 2, above, from the
18 values proposed in Table 2 of my originally filed direct testimony are reflected in
19 Exhibit No. (EHB-1).

1 **Q. PLEASE BRIEFLY EXPLAIN THE CHANGES REFLECTED IN EXHIBIT**
2 **NO. (EHB-1).**

3 **A.** Correcting the PROSYM inputs to represent the longer single outage at the
4 Jasper Generating Plant, which is a large and efficient generating facility, resulted
5 in a change to Avoided Energy Costs (Line 1). This is because the reduced
6 availability of the Jasper Generating Plant is expected to result in a higher avoided
7 energy cost during the scheduled outage. This correction also yielded small changes
8 to the Avoided Criteria Pollutants (Line 5) and Environmental Costs (Line 10)
9 components, both of which address emission related components. As a result of
10 these changes, the subtotal on Line 11 changed, as did the value for Line Losses
11 shown on Line 12 and the Total Value of NEM Distributed Resources shown on
12 Line 13.

13
14 **Q. WHAT IS THE CHANGE IN THE TOTAL VALUE OF NEM**
15 **DISTRIBUTED ENERGY RESOURCES AFTER CORRECTION OF**
16 **THESE ERRORS?**

17 **A.** The Total Value of NEM Distributed Energy Resources changed as follows:

Table 3
Changes in Total Value of NEM Distributed Energy Resources

	<u>Current Period</u> <u>(\$/kWh)</u>	<u>10-Year Levelized</u> <u>(\$/kWh)</u>	<u>Components</u>
<u>13</u>	<u>\$0.00126</u>	<u>\$0.00083</u>	<u>Total Value of NEM Distributed</u> <u>Energy Resources</u>

Q. NOW, TURNING TO THE COMPONENTS OF VALUE, PLEASE EXPLAIN
THE COMPONENT OF VALUE FOR AVOIDED ENERGY COSTS
SHOWN ON LINE NO. 1 OF TABLE 2.

A. The component of value for avoided energy costs are based on the PURPA avoided cost values previously discussed with one adjustment. The avoided energy costs are adjusted to remove the cost of criteria pollutants and environmental costs, which are then reflected in the components shown on Lines 5 and 10, i.e., Avoided Criteria Pollutants and Environmental Costs. The avoided energy costs value is based on the energy profile of a solar QF.

Q. PLEASE EXPLAIN THE COMPONENT OF VALUE FOR AVOIDED
CAPACITY COSTS SHOWN ON LINE NO. 2 OF TABLE 2.

A Pursuant to Commission Order No. 2020-244, the component of value for avoided capacity is set to \$3.79/MWH. The Commission adopted the recommendation of ORS Witness Horii in Docket No. 2019-184-E for the capacity value of solar. This calculation is based on the ELCC method as interpreted by

1 Witness Horii and applied to an annualized avoided capacity value of
2 \$66,757.50/kW. This value is applied to a solar QF energy profile and results in the
3 value shown on Line No. 2 of Table 2.
4

5 **Q. PLEASE EXPLAIN THE COMPONENT OF VALUE FOR ANCILLARY**
6 **SERVICES SHOWN ON LINE NO. 3 OF TABLE 2.**

7 A. Ancillary services refer to the need to balance the load and generation on the
8 system and include operating reserves, both spinning and non-spinning; frequency
9 regulation; and voltage control. DESC expects that the cost of providing these
10 ancillary services will increase with the addition of large amounts of solar energy.
11 DESC has assigned a value of zero to ancillary services but will address non-zero
12 costs under the overlapping concept of integration cost on Line No. 8 of Table 2.
13

14 **Q. PLEASE EXPLAIN THE COMPONENT OF VALUE FOR TRANSMISSION**
15 **AND DISTRIBUTION CAPACITY SHOWN ON LINE NO. 4 OF TABLE 5.**

16 A. DESC's NEM distributed resources do not avoid transmission or distribution
17 capacity and therefore the value of this component is zero. The transmission and
18 distribution peak load occur on cold winter mornings most often before sunrise and
19 always before significant production from PV solar systems. Even if some
20 contribution were assumed in the peak demand period, it could not be counted for
21 planning or contingencies due to the intermittent nature of the resource. Therefore,

1 when evaluating the need for improvements on those power delivery systems, no
2 contribution can be assumed from PV solar generation and no credit is given in the
3 model when planning for a contingency.

4 On the distribution system, DESC's engineers must design a circuit for
5 circumstances that will stress the circuit. In particular, since solar output is
6 intermittent during the day and non-existent at night, engineers must also plan for
7 when the DER are not supplying power. The distribution line must carry the load
8 both when the DER are generating and when they are not because of weather-related
9 factors or because the DER are offline. As such, the DER do not provide any benefit
10 in the analysis and are not assigned value.

11
12 **Q. PLEASE EXPLAIN THE COMPONENT OF VALUE FOR AVOIDED**
13 **CRITERIA POLLUTANTS SHOWN ON LINE NO. 5 OF TABLE 2.**

14 A. DESC associates a positive avoided cost value to criteria pollutants NO_x and
15 SO₂. The avoided cost of these pollutants typically is included in the Company's
16 avoided energy costs but these costs have been separated out in this proceeding for
17 reporting purposes.

1 **Q. PLEASE EXPLAIN THE COMPONENT OF VALUE FOR AVOIDED CO₂**
2 **POLLUTANTS SHOWN ON LINE NO. 6 OF TABLE 2.**

3 A. Pursuant to Commission Order No. 2015-194, the component of value for
4 avoided CO₂ is set at zero until state or federal laws or regulations result in an
5 avoidable cost on utility systems for these emissions. Currently, there are no state
6 or federal laws or regulations restricting the emission of CO₂ pollutants and,
7 therefore, the value for CO₂ pollutants is zero.
8

9 **Q. PLEASE EXPLAIN THE COMPONENT OF VALUE FOR FUEL HEDGE**
10 **SHOWN ON LINE NO. 7 OF TABLE 2.**

11 A. DESC does not hedge fuels for electric generation. Therefore, the value for
12 fuel hedging is zero.
13

14 **Q. PLEASE EXPLAIN THE COMPONENT OF VALUE FOR UTILITY**
15 **INTEGRATION & INTERCONNECTION COSTS SHOWN ON LINE NO. 8**
16 **OF TABLE 2.**

17 A. Pursuant to Commission Order No. 2020-244, issued in Docket No. 2019-
18 184-E, the component of value for the integration charge is set to \$0.96/MWH. The
19 Commission adopted the recommendation of SBA Witness Burgess in Order No.
20 2020-244 to set an interim variable integration charge for solar generation. This
21 interim integration charge will be deducted from the avoided cost credit until the

Commission orders a final integration charge. All rates based on this interim integration charge are subject to a “true-up” as provided in Order No. 2020-244.

Q. PLEASE EXPLAIN THE COMPONENT OF VALUE FOR UTILITY ADMINISTRATION COSTS SHOWN ON LINE NO. 9 OF TABLE 2.

A. At present, the administration costs of NEM Distributed Energy Resources are being collected through a DER rider being added to the fuel clause. Therefore, the value of this component for purposes of the NEM Distributed Energy Resources methodology calculation is zero.

Q. PLEASE EXPLAIN THE COMPONENT OF VALUE FOR ENVIRONMENTAL COSTS SHOWN ON LINE NO. 10 OF TABLE 2.

A. The component of “Environmental Costs” refers to any appropriate environmentally related costs that were not already included in other net metering methodology components. DESC associates a positive avoided cost value to represent the cost of certain environmental materials used in the generation of energy, such as lime, limestone, and ammonia. The avoided cost of these materials typically is included in the Company’s avoided energy costs, but these costs have been separated out in this proceeding for reporting purposes.

1 **Q. PLEASE EXPLAIN THE COMPONENT OF VALUE FOR ENERGY**
2 **LOSSES/LINE LOSSES SHOWN ON LINE NO. 11 OF TABLE 2.**

3 A. When a NEM Distributed Energy Resource serves a customer's load behind
4 their meter or when it puts power onto the distribution system, DESC avoids having
5 to generate that specific amount of energy. The Company also avoids the energy
6 required to bring the power to the customer's meter or the distribution system, i.e.,
7 the line losses associated with delivering power across the system. The loss factor
8 used for these NEM values represents the cumulative marginal line losses at a
9 residential customer's meter.

10 **Q. HAS THE GENERAL ASSEMBLY ENACTED LEGISLATION THAT**
11 **WILL PHASE OUT THE NEM PROGRAM?**

12 A. Yes. In South Carolina Code Section 58-40-20(B), the General Assembly
13 requires electric utilities to make NEM available to customer-generators who apply
14 before June 1, 2021, and allows the customer-generators to continue NEM "as
15 provided for in Commission Order No. 2015-194 until May 31, 2029."

16

1 **Q. WHAT PROGRAM HAS THE GENERAL ASSEMBLY PROVIDED FOR**
2 **CUSTOMER-GENERATORS WHO APPLY AFTER MAY 31, 2021?**

3 A. In Section 58-40-20(F), the General Assembly required development of a
4 “solar choice metering tariff” for customer-generators who apply after May 31,
5 2021. DESC’s solar choice metering tariff is the subject in Docket No. 2020-229-E.
6

7 **Q. EVEN THOUGH THE GENERAL ASSEMBLY HAS ENACTED**
8 **LEGISLATION PROVIDING FOR TERMINATION OF THE NEM**
9 **PROGRAM AND ESTABLISHMENT OF THE SOLAR CHOICE**
10 **PROGRAM, IS IT NECESSARY TO CONSIDER THE COSTS OF THE**
11 **NEM PROGRAM IN THIS PROCEEDING?**

12 A. Yes. Because the Company’s current NEM program will continue until May
13 31, 2029, for customer-generators applying on or before May 31, 2021, it is
14 necessary to consider the costs of the NEM program as part of the Company’s fuel
15 cost proceedings during the pendency of that program.
16

17 **MODIFICATION OF METHOD TO DETERMINE COAL PRICE**
18 **DISPATCH SIGNAL**

19 **Q. WHAT IS THE PURPOSE OF THE COAL PRICE DISPATCH SIGNAL?**

20 A. The purpose of the coal price dispatch signal is to provide for a price point
21 in dollars per MWH that will be utilized to dispatch coal-fired generating units in

1 economic order as compared to price points used for other units such as those fueled
2 by natural gas.

3
4 **Q. WHAT METHODOLOGY HAS DESC HISTORICALLY EMPLOYED TO**
5 **DETERMINE THE COAL PRICE DISPATCH SIGNAL?**

6 A. The Company historically has dispatched coal units using a fuel price signal,
7 the weighted average cost of projected coal receipts, that is updated monthly. This
8 fuel price signal is set in a memorandum issued monthly by DESC's fuel
9 procurement department that summarizes the anticipated coal train receipts for the
10 month and the average total delivered cost (cost of coal plus transportation costs) of
11 those anticipated receipts by generation facility.

12
13 **Q. WHAT IS THE NEW METHODOLOGY THAT DESC IS EMPLOYING TO**
14 **DETERMINE THE COAL PRICE DISPATCH SIGNAL?**

15 A. DESC will be using the replacement cost for coal as the dispatch signal.
16 Replacement cost is the cost to replace the coal at the time it is consumed.

17
18 **Q. WHY IS DESC CHANGING THE METHODOLOGY OF DETERMINING**
19 **THE COAL PRICE DISPATCH SIGNAL?**

20 A. Using replacement cost provides a dispatch signal that is more responsive to
21 market changes than the prior methodology employed by DESC. The appropriate

1 replacement cost can be obtained from market indices that are published on a daily
2 or weekly basis, whereas the prior methodology used a signal computed only once
3 a month.

4 Using replacement cost also better reflects and incorporates into pricing the
5 interrelated coal and natural gas markets, because natural gas units are also
6 dispatched based off the daily commodity spot price. The Company believes that,
7 going forward, using significantly different fuel price signals for dispatching coal
8 and natural gas units with much different timing would be less effective and
9 efficient. Continuing to use anticipated receipts as a signal would lag the markets
10 and could diminish the impact of economy spot purchases.

11 The industry standard for a coal dispatch price signal is replacement cost.
12 Duke Energy Carolinas, Duke Energy Progress, and the South Carolina Public
13 Service Authority all use replacement cost as the coal price dispatch signal. The
14 change will further intra-company consistency since Dominion Energy Virginia
15 uses replacement cost as its coal price dispatch signal.

16
17 **Q. WILL THIS CHANGE IN METHODOLOGY IMPACT THE**
18 **ACCOUNTING PROCESS CURRENTLY USED FOR COAL?**

19 A. No. The Company will continue expensing coal at the actual purchase cost
20 as the coal is removed (consumed) from inventory.

1 **Q. WHEN DID THE COMPANY IMPLEMENT THE CHANGE IN**
2 **METHODOLOGY?**

3 A. The change was implemented on January 1, 2021. This date for the change
4 was selected because it was the beginning of a new fuel cost review period for the
5 Company and because the Company also changed to a new fuel inventory
6 management software, COMTRAC, on that same date.

7
8 **Q. DID THE COMPANY MEET WITH THE OFFICE OF REGULATORY**
9 **STAFF (“ORS”) BEFORE IMPLEMENTING THE CHANGE IN**
10 **METHODOLOGY?**

11 A. Yes. Company personnel met with ORS representatives on November 19,
12 2020, to discuss the then-proposed modification to the methodology for determining
13 the coal price dispatch signal. ORS representatives raised no objection to the
14 change.

15 **CONCLUSION**

16 **Q. WHAT IS DESC ASKING THE COMMISSION TO DO IN THIS**
17 **PROCEEDING?**

18 A. DESC respectfully requests that the Commission approve the calculation of
19 the total value of NEM Distributed Energy Resources as set forth in my testimony.

20

1 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

2 **A. Yes.**